



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,539	12/05/2003	Jason Charles Pelly	282557US8X	8289
22850	7590	01/26/2009		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER HOANG, DANIEL L	
			ART UNIT 2436	PAPER NUMBER
			NOTIFICATION DATE 01/26/2009	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com  
oblonpat@oblon.com  
jgardner@oblon.com

### Office Action Summary

**Application No.**

10/728,539

**Applicant(s)**

PELLEY ET AL.

**Examiner**

DANIEL L. HOANG

**Art Unit**

2436

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 October 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5, 7-15, 17, 18, 21, 22, 24 and 26-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7-14, 17, 18, 21, 22 and 24 is/are rejected.
- 7) ☒ Claim(s) 5, 15, 26-29 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### RESPONSE TO ARGUMENTS

Applicant's arguments, see Arguments/Remarks, filed 10/21/08, with respect to the rejection(s) of claim(s) 1, 11, 17, and 21 under 35 USC 102(e) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Shimizu, US Patent No. 6971012.

### CLAIM REJECTIONS

#### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4, 7-14, 17-18, 21-22, and 24 are rejected under 35 U.S.C. 102(e) as being anticipated by Shimizu, US Patent No. 6971012.

#### **As per claim 1, 11, 17, 21-24, Shimizu teaches:**

A data processing apparatus operable to identify at least one of a plurality of code words, forming a code word set, present in a marked version of a material item, the marked version having been formed by combining each of a plurality of parts of a code word with one of a plurality of units from which the material item is comprised, the apparatus comprising:  
a recovery processor operable to recover at least one part of the code word from a corresponding unit of the marked material item, and

*[see col. 5, lines 66-67, wherein the bit information is viewed as the claimed "part of the code word" and the frame from which the bit information is recovered is viewed as the claimed "corresponding unit of the marked material item".]*

a correlator operable to generate for the marked material unit a dependent correlation value by correlating the part of the code word recovered from the material unit with a corresponding part of at least one of a re-generated code words from the code word set, and

*[see fig. 4, element 440]*

a detector operable to determine whether at least one of the code words is present in the marked material item from the dependent correlation value for the part of the code word exceeding a predetermined threshold, wherein

*[see fig. 4, element 460]*

when the dependent correlation value does not exceed the predetermined threshold the correlator is operable under control of the detector to iteratively increase a number of code word parts used to form the recovered part of the code word, each code word part taken from successive material units,

*[see fig. 4, element 470]*

each time the number of code word parts used to form the recovered part of the code word is iteratively increased, the correlator is operable to generate a dependent correlation value by correlating the recovered part of the code word with corresponding parts of the re-generated code word, the iterative increasing of the recovered part of the code word continuing until the whole code word is recovered and correlated with the whole regenerated code word or the predetermined threshold exceeded.

*[see col. 6, lines 1-13]*

### **As per claim 2, 12, Shimizu teaches:**

A data processing apparatus as claimed in claim 1, wherein the detector is operable in combination with the correlator to form a dependent correlation value for a plurality of parts of the recovered code word, and if the correlation value exceeds the predetermined threshold for one of the dependent correlation

Art Unit: 2136

values, the detector is operable to identify the code word as present according to a predetermined false detection probability.

*[see fig. 4, element 460, "yes"]*

**As per claim 3, 4, 13, 14, Shimizu teaches:**

A data processing apparatus as claimed in claim 2, wherein the detector is operable in combination with the correlator to form the dependent correlation values by combining the parts of the code word recovered from successive material units, and by correlating the parts formed from successive material units with corresponding part of the regenerated code word.

*[see col. 6, lines 1-13]*

**As per claim 7, Shimizu teaches:**

A data processing apparatus as claimed in claim 1, wherein the detector and the correlator are operable in combination to form the dependent correlation value for at least one selected code word re-generated from the set of code words, the code word being selected from the set in accordance with the relative magnitudes of the dependent correlation value formed for each code word of the set.

*[see col.6, lines 28-45]*

**As per claim 8, Shimizu teaches:**

A data processing apparatus as claimed in claim 1, wherein the plurality of code words are formed from a first code word having a plurality of predetermined pseudo-randomly distributed coefficients and by generating other code words of the set by cyclically shifting the first code word, and the correlation value is formed for a plurality of the code words by forming a Fourier transform of the recovered code word, forming a Fourier transform of the first code word of the set, forming the complex conjugate of one of the Fourier transform of the recovered code word and the Fourier transform of the regenerated code word, forming intermediate product samples by multiplying each of the Fourier transform samples of the recovered code word and the corresponding Fourier transform samples of the first code word, forming correlation samples by forming an inverse transform of the intermediate product samples, each of the

Art Unit: 2136

correlation value samples providing the correlation value for one of the set of code words, wherein the forming a Fourier transform of the part of the recovered code word comprises setting the remaining part of the recovered code word to zero, and forming the Fourier transform of the recovered code word, and the forming a Fourier transform of the first code word of the set comprises setting the remaining part of the first code word to zero, and forming the Fourier transform of the first code word.

*[see col. 8, lines 49-67]*

**As per claim 9, Shimizu teaches:**

A data processing apparatus as claimed in claim 1, wherein the code word has been introduced into the material item in the discrete cosine transform domain, the apparatus comprising a discrete cosine transform processor operable to transform the marked material item and the original material item into the discrete cosine transform domain, wherein the recovery processor is operable to generate the recovered code word by subtracting corresponding discrete cosine transform coefficients of the original material version from discrete cosine transform coefficients of the marked material version.

*[see col. 8, lines 49-67]*

**As per claim 10, Shimizu teaches:**

A data processing apparatus as claimed in claim 1, wherein the material is video material, the material units being video images.

*[see col. 2, lines 59-67]*

**As per claim 18, Shimizu teaches:**

An encoding data processing apparatus as claimed in claim 17, wherein the plurality of code words are formed from a first code word having a plurality of predetermined pseudo-randomly distributed coefficients and by generating other code words of the set by cyclically shifting the first code word.

*[see col. 6, lines 15-45]*

Art Unit: 2136

## CONCLUSION

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

### ***Allowable Subject Matter***

Claims 5, 15, and 26-29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

## POINTS OF CONTACT

- \*. Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**Hand-delivered responses** should be brought to

Customer Service Window  
Randolph Building  
401 Dulany Street  
Alexandria, VA 22314

Art Unit: 2136

\*. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel L. Hoang whose telephone number is 571-270-1019. The examiner can normally be reached on Monday - Thursday, 8:00 a.m. - 5:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nasser Moazzami can be reached on 571-272-4195. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

*Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).*

/Daniel L. Hoang/  
Examiner, Art Unit 2436

/Nasser G Moazzami/  
Supervisory Patent Examiner, Art Unit 2436